

User Manual

IP CAMERA





WARNINGS

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MISTURE.

DO NOT INSERT ANY METALLIC OBJECT THROUGH VENTILATION GRILLS.

CAUTION

	CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN	
<p>CAUTION : TO REDUCE THE RISK OF ELECTRIC SHOCK. DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.</p>		

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I. Preface

This is a 720P real time IP camera with the web server built in. User can view real-time video via IE browser. It supports H.264, JPEG and MPEG4 video compression which provides smooth and high video quality. The video can be stored in the Micro SD card and playback remotely.

With user friendly interface, it is an easy-to-use IP camera which is designed for security application.

II. Product Specifications

- Mega-Pixel CMOS Sensor
- Digital Noise Reduction
- Digital Wide Dynamic Range
- Shutter Speed adjustment
- Sense Up adjustment
- Day&Night Switch Time Control Manfully (Option)
- Power over Ethernet (Option)
- H.264/ JPEG/ MPEG4 Compression
- Micro SD card Backup
- Support iPhone/Android/Mac
- SDK for Software Integration

Vari Focus Lens Specifications

	PoE Model	ICR Model
Hardware		
CPU	ARM 9 ,32 bit RISC	
RAM	128MB	
Flash	16MB	
Image sensor	1 / 4" Mega-Pixel CMOS sensor	
Sensitivity	1.0 Lux @30fps	1.0 Lux @30fps (IR Off) 0 Lux @30fps (IR On)
Shutter Time	1 / 5 ~ 1 / 10,000 sec	
Lens Type	Varifocal 2.8mm ~ 10mm F1.2 Megapixel lens	

I/O	1 DI / 1 DO	
Audio	G.711(64K) and G.726(32K,24K) audio compression Input : External Mic in Output: External Audio out	
Power over Ethernet	Yes	No
Power Consumption	PoE Power consumption Max: 2.88W	12V DC Power consumption Max: 2.64W (IR Off) 4.08W (IR ON)
Operating Temperature	-10°C ~ 45°C	
Dimensions	131.2mm (Ø) x 94.3mm (H)	
Weight	340g	
IR LEDs (Option)		
LEDs	No	18 LEDs, 850nm,
IR distance	No	15M
Network		
Ethernet	10/ 100 Base-T	
Network Protocol	HTTP, HTTPS, SNMP, QoS/DSCP, Access list, IEEE 802.1X, RTSP, TCP/ IP, UDP, SMTP, FTP, PPPoE, DHCP, DDNS, NTP, UPnP, 3GPP, SAMBA, IPv4, IPv6	
System		
Video Resolution	1280x800@30fps,1280x720@30fps , 640x480@30fps, 320x240@30fps, 176x144@30fps	
Video Adjust	Brightness, Contrast, Hue, Saturation, Sharpness, AGC, Shutter Speed, Sense-Up, D-WDR, Flip, Mirror, Noise reduction, Exposure	Brightness, Contrast, Hue, Saturation, Sharpness, AGC, Shutter Speed, Sense-Up, D-WDR, Flip, Mirror, Noise reduction, Exposure, Day&Night
Triple Streaming	Yes	
Image Snapshot	Yes	
Full Screen Monitoring	Yes	
Privacy Mask	Yes, 3 different areas	
Compression Format	H.264/ JPEG/ MPEG4	
Video Bitrates Adjust	CBR, VBR	
Motion Detection	Yes, 3 different areas	

Triggered Action	Mail, FTP, Save to SD card, SAMBA, DO
Pre/ Post Alarm	Yes, configurable
Security	Password protection, IP address filtering, HTTPS encrypted data transmission, 802.1X port-based authentication for network protection, QoS/DSCP
Firmware Upgrade	HTTP mode, can be upgraded remotely
Simultaneous Connection	Up to 10
SD card management	
Recording Trigger	Motion Detection, IP check, Network break down (wire only), Schedule, DI
Video Format	AVI, JPEG
Video Playback	Yes
Delete Files	Yes
Web browsing requirement	
OS	Windows 7, 2000, XP, 2003, Microsoft IE 6.0 or above, Chrome, Safari
Mobile Support	iOS 4.3 or above, Android 1.6 or above.
Hardware	
Suggested	Intel Dual Core 2.53G, RAM: 1024MB, Graphic card: 128MB

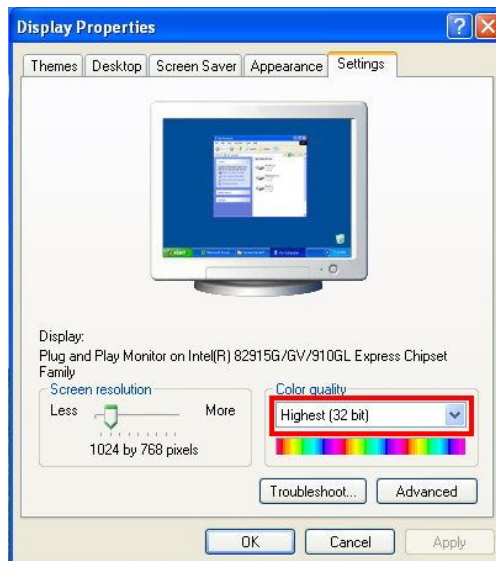
III. Product Installation

A. Monitor Setting

- i. Right-Click on the desktop. Select “ Properties”



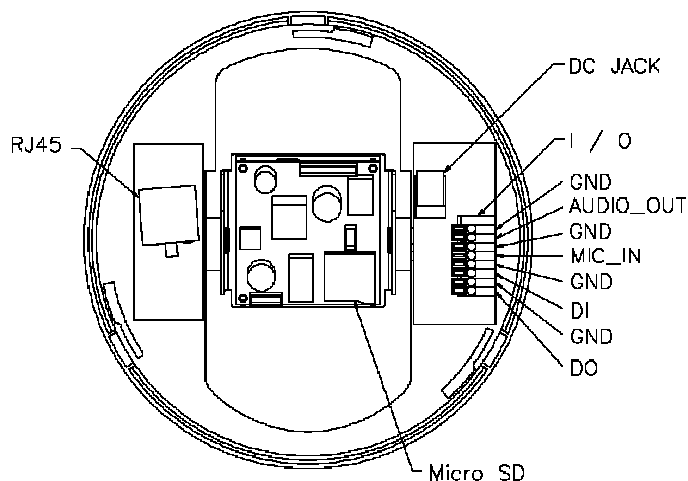
- ii. Change color quality to highest (32bit).



B. Hardware Installation and I/O Pin

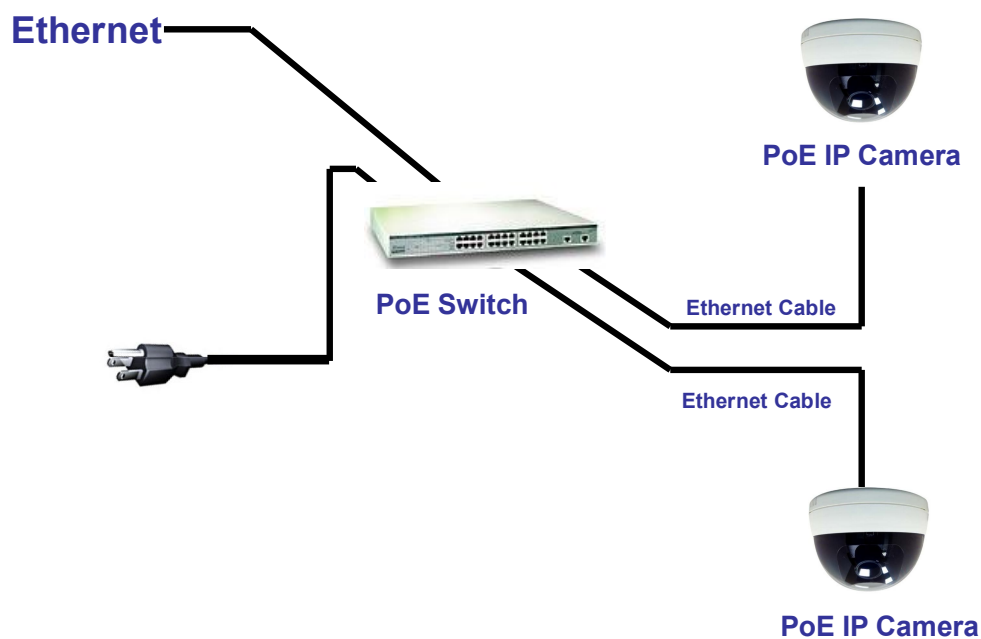
Assignment

- i. Connect power adaptor.
- ii. Connect IP Cam to PC or network with Ethernet cable.
- iii. Set up the network configurations according to the network environment.
For further explanation, please refer to chapter VI, "Network Configuration for IP CAMERA".



- iv. PoE (Power Over Ethernet)(Optional) **802.3af, 15.4W PoE Switch is recommended**

Power over Ethernet (PoE) is a technology that integrates power into a standard LAN infrastructure. It enables power to be provided to the network device, such as an IP phone or a network camera, using the same cable as that used for network connection. It eliminates the need for power outlets at the camera locations and enables easier application of uninterruptible power supplies (UPS) to ensure 24 hours a day, 7 days a week.

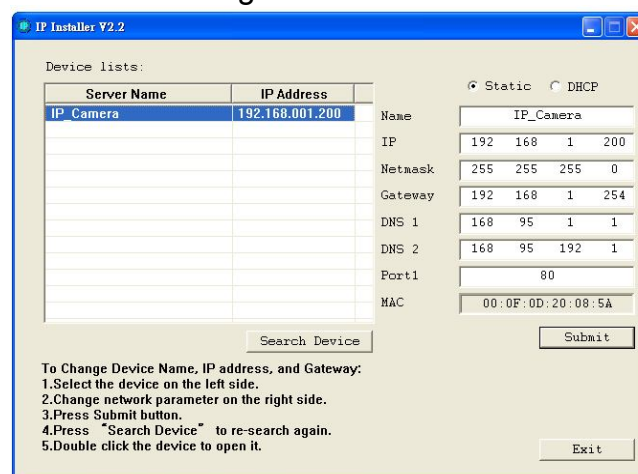


C. IP Assignment

- i. Use the software, “IP Installer” to assign the IP address of IP CAMERA. The software is in the attached software CD.
- ii. IP installer supports two languages.
 - a. IPInstallerCht.exe : Chinese version.
 - b. IPInstallerEng.exe : English version.
- iii. There are 3 kinds of IP configuration.
 - a. Fixed IP (Public IP or Virtual IP)
 - b. DHCP (Dynamic IP)
 - c. Dial-up (PPPoE)
- iv. Execute IP Installer.
- v. For Windows XP SP2 user, it may popup the following message box. Please click “Unblock”.



- vi. IP Installer configuration:



- vii. IP Installer will search all IP Cameras connected on Lan. The user can click “Search Device” to search again.
- viii. Click one of the IP Camera listed on the left side. The network

configuration of this IP camera will show on the right side. You may change the “name” of the IP Camera to your preference (eg: Office, warehouse). Change the parameter and click “Submit” then click “OK”. It will apply the change and reboot the Device.



- ix. Please make sure the subnet of PC IP address and IP CAM IP address are the same.

The same Subnet:

IP CAM IP address: 192.168.1.200

PC IP address: 192.168.1.100

Different Subnets:

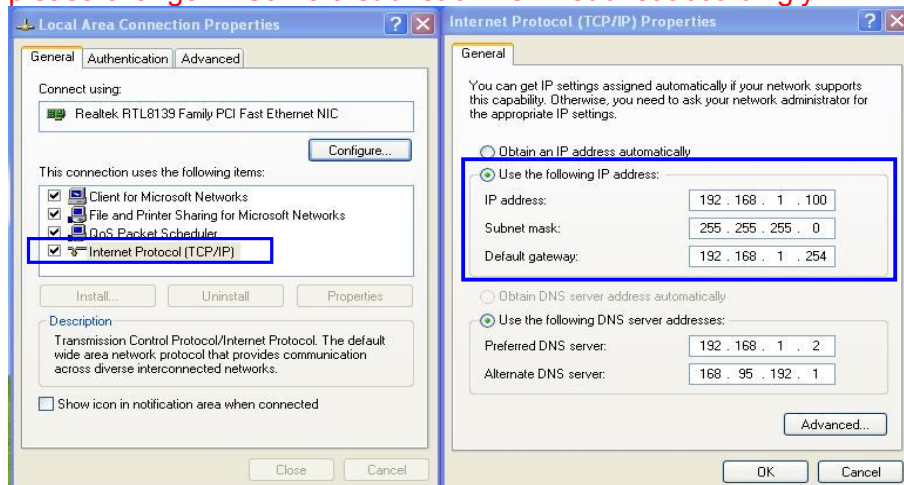
IP CAM IP address: 192.168.2.200

PC IP address: 192.168.1.100

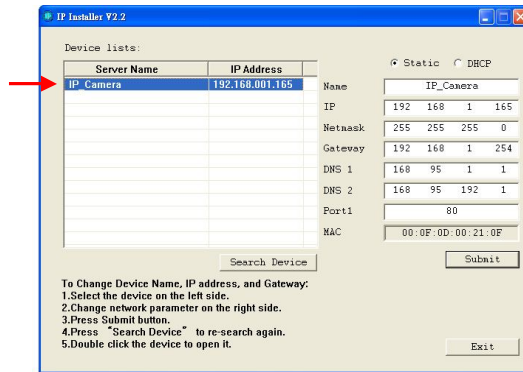
To Change PC IP address:

Control Panel → Network Connections → Local Area Connection Properties → Internet Protocol (TCP/IP) → Properties

Please make sure your IP Camera and PC have the same Subnet. If not, please change IP Camera subnet or PC IP subnet accordingly.



- x. A quick way to access remote monitoring is to left-click the mouse twice on a selected IP Camera listed on “Device list” of IP Installer. An IE browser will be opened.



- xi. Then, please key in the default “user name: admin” and “password: admin”.



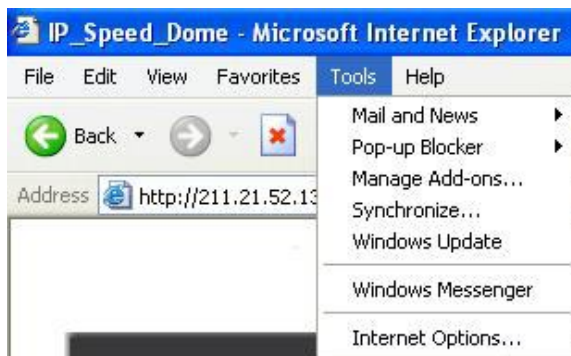
D. Install ActiveX control:

For the first time to view the camera video via IE, it will ask you to install the ActiveX component.

If the installation failed, please check the security setting for the IE browser.

- i. IE → Tools → Internet Options... → Security Tab → Custom Level... → Security Settings → Download unsigned ActiveX controls → Select “Enable” or Prompt.
- ii. IE → Tools → Internet Options... → Security Tab → Custom Level... → Initialize and script ActiveX controls not marked as safe → Select “Enable” or Prompt.

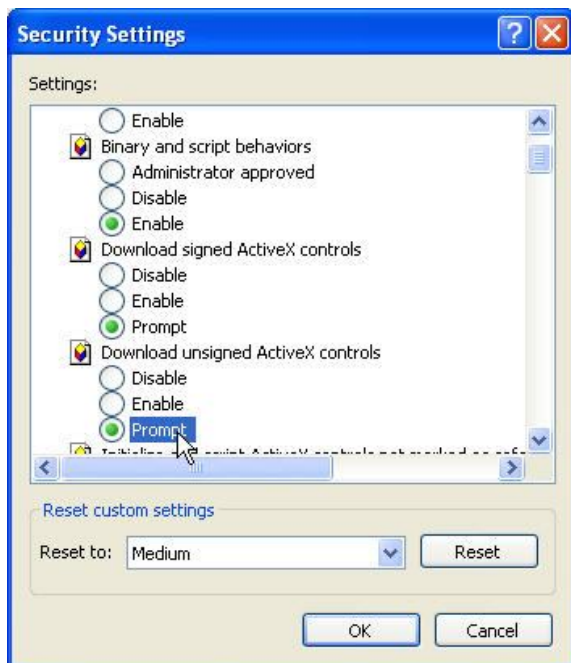
1



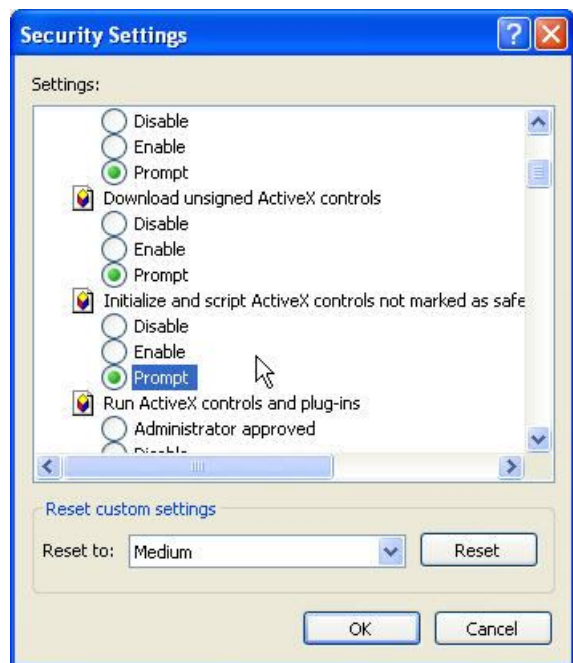
2



3

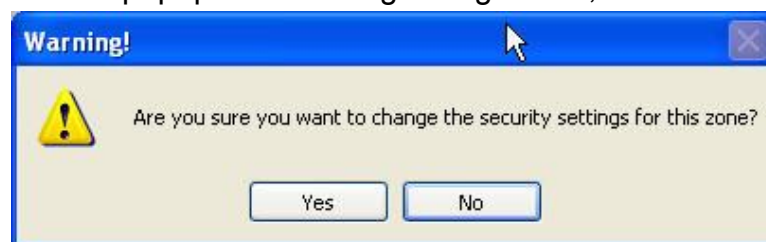


4



5

When popup the following dialogue box, click "Yes".



IV. Live Video

Start a IE browser, type the IP address of the IP camera in the address field. It will show the following dialogue box. Key-in the user name and password. The default user name and password are “**admin**” and “**admin**”.



When connect to the IP CAMERA ◦ The following program interface shows.





1. : Get into the administration page

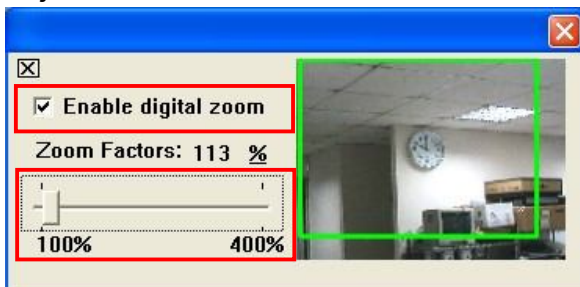


2. : Video Snapshot
3. Show system time, video resolution, and video refreshing rate
4. Adjust image, 1/2x, 1x, 2x
5. Select video streaming source (When streaming 2 setting in 『Video Setting』 is closed, this function will not display)
6. IP Camera supports 2-way audio. Click the “Chatting” check box. Then you can use microphone which connects to the PC to talk to server side, which is IP Camera side
7. Control the relay which is connected to this camera

Right-Click the mouse on the video, it will show a pop-up menu.





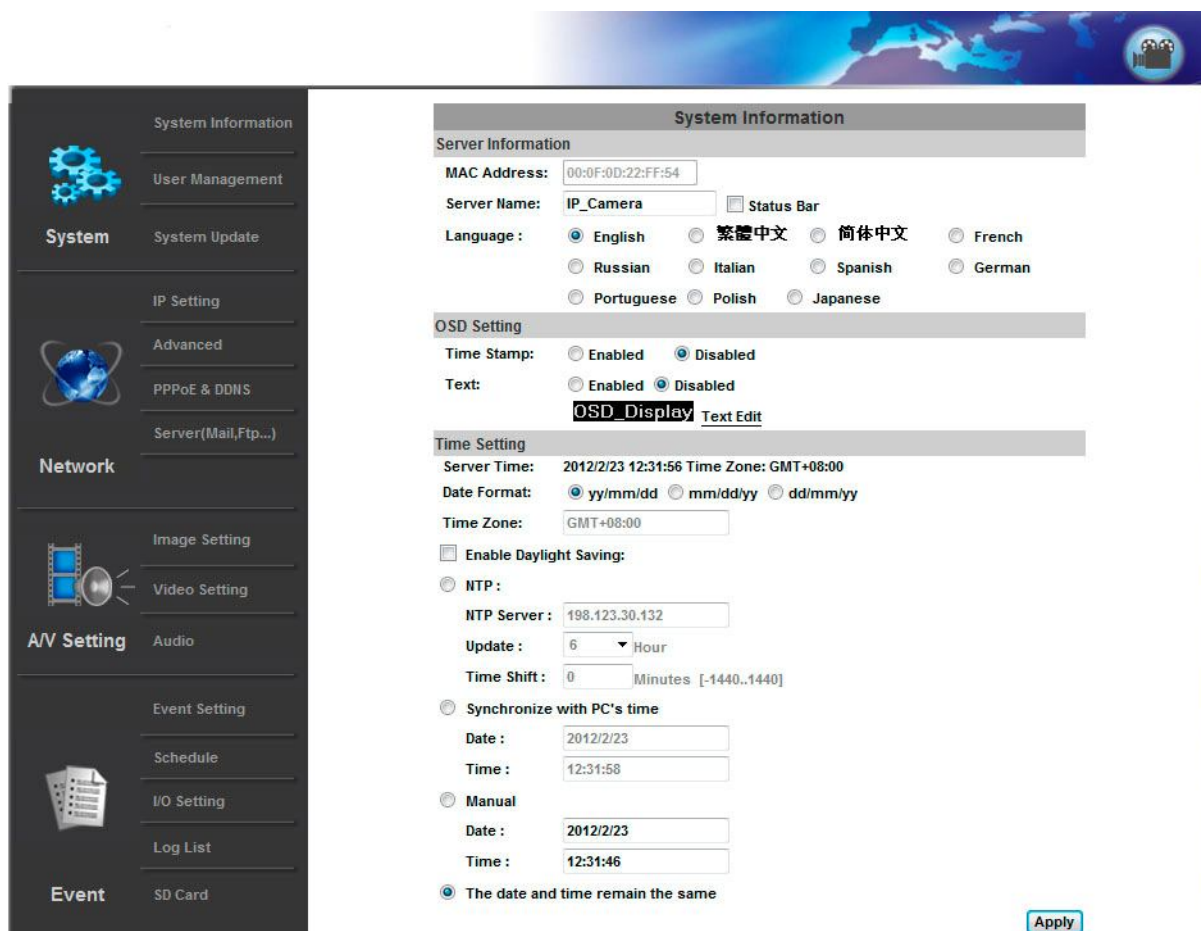
1. Snapshot : Save a JPEG picture
2. Record Start : Record the video in the local PC. It will ask you where to save the video. To stop recording, right-click the mouse again. Select “Record Stop”. The video format is AVI. Use Microsoft Media Player to play the recorded file.
3. Full Screen : Full-screen mode.
4. ZOOM: Enable zoom-in and zoom-out functions. Select “Enable digital zoom” option first within the pop-up dialogue box and then drag and drop the bar to adjust the zoom factors.



V. Configuration



Click  to get into the administration page. Click  to go back to the live video page.

System Information

Server Information

MAC Address: 00:0F:0D:22:FF:54

Server Name: IP_Camera ☐ Status Bar

Language: ☒ English ☐ 繁體中文 ☐ 简体中文 ☐ French
☐ Russian ☐ Italian ☐ Spanish ☐ German
☐ Portuguese ☐ Polish ☐ Japanese

OSD Setting

Time Stamp: ☐ Enabled ☒ Disabled

Text: ☐ Enabled ☒ Disabled

OSD_Display [Text Edit](#)

Time Setting

Server Time: 2012/2/23 12:31:56 Time Zone: GMT+08:00

Date Format: ☒ yy/mm/dd ☐ mm/dd/yy ☐ dd/mm/yy

Time Zone: GMT+08:00

☐ Enable Daylight Saving:

☐ NTP :

NTP Server : 198.123.30.132

Update : 6 Hour

Time Shift : 0 Minutes [-1440..1440]

☐ Synchronize with PC's time

Date : 2012/2/23

Time : 12:31:58

☐ Manual

Date : 2012/2/23

Time : 12:31:46

☒ The date and time remain the same

[Apply](#)

A. System

i. System Information

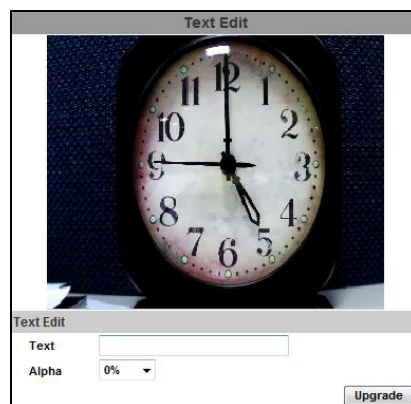
- a. Server Information: Set up the camera name, select language, and set up the camera time.
 1. Server Name : This is the Camera name. This name will show on the IP Installer.
 2. Select language : There are English, Traditional Chinese, and Simplified Chinese to select. When change, it will show the following dialogue box for the confirmation of changing language.



- b. OSD Setting: Select a position where date & time stamp / text showing on screen.



Moreover, click Text Edit can entry to adjust the OSD contents which is including Size and Alpha of text. Finally, click **Upgrade** button to reserve the setting.



- c. Time setting :
 1. Daylight Saving Time(DST) : Select "Enable Daylight Saving", There are DST Start and DST End can be set.

Time Setting

Server Time: 2011/9/22 11:11:33 Time Zone: GMT+08:00

Date Format: ☒ yy/mm/dd ☐ mm/dd/yy ☐ dd/mm/yy

Time Zone: GMT+08:00

☒ Enable Daylight Saving:

DST Start:	Month	Week	Day of Week	Time
Mar	2nd	Sun	12 am	
Nov	1st	Sat	12 am	

2. Server Time Setting : Select options to set up time - “NTP”, “Synchronize with PC’s time”, “Manual”, “The date and time remain the same”.

Time Setting

Server Time: 2011/9/22 10:50:44 Time Zone: GMT+08:00

Date Format: ☒ yy/mm/dd ☐ mm/dd/yy ☐ dd/mm/yy

Time Zone: GMT+08:00

☐ Enable Daylight Saving:

☒ NTP :

NTP Server : 198.123.30.132

Update : 6 Hour

Time Shift : 0 Minutes [-1440..1440]

☐ Synchronize with PC's time

Date : 2011/9/22

Time : 10:50:46

☐ Manual

Date : 2011/9/22

Time : 10:34:41

☒ The date and time remain the same

Apply

ii 、 User Management

IP CAMERA supports three different users, administrator, general user, and anonymous user.

User Management

Anonymous User Login

☐ YES ☒ NO Setting

Add User

Username:

Password:

Confirm:

Add/Set

User List

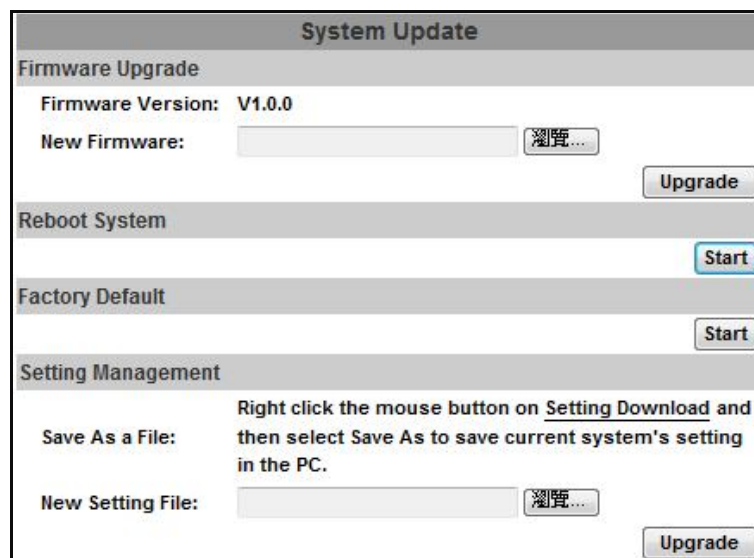
Username	User Group	Modify	Remove
admin	Administrator	Edit	

- a. Anonymous User Login :
Yes : Allow anonymous login.
No : Need user name & password to access this IP camera.
- b. Add user :
Type the user name and password, then click “Add/Set”.

- c. Click “edit” or “delete” to modify the user.



iii 、 System update :



- a. To update the firmware online, click “Browse...” to select the firmware. Then click “Upgrade” to proceed.
- b. Reboot system : re-start the IP camera
- c. Factory default : delete all the settings in this IP camera.
- d. Setting Management : User may download the current setting to PC, or upgrade from previous saved setting.
 1. Setting download:
Right-click the mouse button on Setting Download → Select “Save AS...” to save current IP CAM setting in PC → Select saving directory → Save
 2. Upgrade from previous setting
Browse → search previous setting → open → upgrade → Setting update confirm → click [index.html](#). to return to main page

B.Network

i、 IP Setting

IP Camera supports DHCP and static IP.

IP Setting	
IP Assignment	
<input type="radio"/> DHCP	
<input checked="" type="radio"/> Static	
IP Address:	<input type="text" value="192.168.1.200"/>
Subnet Mask:	<input type="text" value="255.255.255.0"/>
Gateway:	<input type="text" value="192.168.1.254"/>
DNS 0:	<input type="text" value="168.95.1.1"/>
DNS 1:	<input type="text" value="168.95.192.1"/>
Port Assignment	
Web Page Port:	<input type="text" value="80"/>
HTTPS Port:	<input type="text" value="443"/>
HTTPS Setting	
UPnP	
UPnP:	<input checked="" type="radio"/> Enabled <input type="radio"/> Disabled
UPnP Port Forwarding:	<input type="radio"/> Enabled <input checked="" type="radio"/> Disabled
External Web Port:	<input type="text" value="80"/>
External https Port:	<input type="text" value="443"/>
External RTSP Port:	<input type="text" value="554"/>

- a. DHCP : Using DHCP, IP Camera will get all the network parameters automatically.
- b. Static IP : Please type in IP address, subnet mask, gateway, and DNS manually.
- c. Port Assignment: user may need to assign different port to avoid conflict when setting up IP assignment.
 1. Web Page Port: Setup web page connecting port and video transmitting port (Default: 80)
 2. HTTPs Port: Setup the https port(Default: 443)
- d. UPnP
 This IP camera supports UPnP, If this service is enabled on your computer, the camera will automatically be detected and a new icon will be added to "My Network Places."
UPnP Port Forwarding : Enable UPnP Port Forwarding can access the Network Camera from the Internet, select this option to allow the Network Camera to open ports on the router automatically so

that video streams can be sent out from a LAN. There are three External port can be set, Web Port, Http Port and RTSP port. To utilize of this feature, make sure that your router supports UPnP and it is activated.

Note: UPnP must be enabled on your computer.

Please follow the procedure to activate UPnP

1. Open the **Control Panel** from the **Start Menu**
2. Select **Add/Remove Programs**
3. Select **Add/Remove Windows Components** and open **Networking Services** section
4. Click **Details** and select **UPnP** to setup the service
5. The IP device icon will be added to "MY Network Places"
6. User may double click the IP device icon to access IE browser

e. RTSP setting

1. RTSP Server: enable or disable
2. RTSP Port: setup port for RTSP transmitting (Default: 554)
3. RTP Start and End Port: in RTSP mode, you may use TCP and UDP for connecting. TCP connection uses RTSP Port (554). UDP connection uses RTP Start and End Port.

ii 、 Advanced :

- a. Https (Hypertext Transfer Protocol Secure) : Https can help protect streaming data transmission over the internal on the higher security level.

Https Setting

Created Request

Subject: C=TW, ST=, L=, O=, OU=, CN=

Date: 2011/Sep/22 08:26:18

[Content](#) [Remove](#)

Installed Certificate

Subject: C=TW, ST=, L=, O=, OU=, CN=

Date: Apr 23 09:05:24 2011 GMT

[Content](#) [Remove](#)

Connection Types

Http&Https ▼

Https setting : Before setting new request, please remove old secure identification at Http connection type.

The screenshot shows the 'Https Setting' window. It has two main sections: 'Created Request' and 'Installed Certificate'. Each section contains a 'Subject' field with the value 'C=TW, ST=, L=, O=, OU=, CN=' and a 'Date' field. In the 'Created Request' section, the date is '2011/Sep/23 10:04:17'. In the 'Installed Certificate' section, the date is 'Apr 23 09:05:24 2011 GMT'. Both sections have 'Content' and 'Remove' buttons. The 'Remove' buttons in both sections are highlighted with red boxes. At the bottom, there is a 'Connection Types' section with a dropdown menu currently set to 'Http'.

1. Created Request: remove secure identification in Created request mode. There is a warning message showing. Please set "Yes" to remove secure identification.
2. Setting the secure identification and apply it.

The screenshot shows the 'Https Setting' window in the 'Create Request' mode. It contains several input fields for creating a certificate: 'Country:', 'State or province:', 'Locality:', 'Organization:', 'Organizational Unit:', and 'Common Name:'. Each field has a corresponding text input box. At the bottom right, there is an 'Apply' button.

3. Installed Certificate: remove Certificate in .Installed Certificate mode. There will be a warning message to check again.
4. There are two ways to set Certificate- Install Signed Certificate and Create Self-Signed Certificate.

The screenshot shows a web interface with two sections. The top section, 'Install Signed Certificate', has a 'Signed Certificate:' label followed by a text input field and a '浏览...' (Browse...) button. Below this is an 'Apply' button. The bottom section, 'Create Self-Signed Certificate', contains several labeled input fields: 'Country:', 'State or province:', 'Locality:', 'Organization:', 'Organizational Unit:', 'Common Name:', and 'Validity:' followed by a numeric input field and the text 'Days'. An 'Apply' button is located at the bottom right of this section.

- b. SNMP(Simple Network Management Protocol) :
1. Enable SNMPv1 or SNMPv2 and write the name of Write Community and Read Community.
 2. Enable SNMPv3, please set Security Name, Authentication Type, Authentication Password, Encryption Type, Encryption Password of Write mode and Read mode.
 3. Enable SNMPv1/SNMPv2 Trap can detect the Trap server. Please set what event need to detect.

The screenshot shows a configuration form for 'SNMPv1/v2c Trap'. It starts with a checkbox labeled 'SNMPv1/v2c Trap'. Below this are three labels with corresponding input fields: 'Trap Address:', 'Trap Community:' (with the text 'public' entered), and 'Trap Event:'. The 'Trap Event:' label is followed by five checkboxes: 'Cold Start', 'Warm Start', 'Link Up', 'Authentication Failed', and 'SD Detect'.

- c. Access list : "Enable IP address filter" can set IP address which can allow or deny to this camera. There are two options, single and range, for user to set the IP address.

IP FILTER

IP ADDRESS FILTER Setting

☒ Enable ip address filter

IPv4 Setting:

add

☒ allow
 ☐ deny

single

address:

single

range

IPv4 List:

No.	IP Address	Filter	Action
1			<div style="border: 1px solid #ccc; padding: 2px;">remove</div>
2			<div style="border: 1px solid #ccc; padding: 2px;">remove</div>
3			<div style="border: 1px solid #ccc; padding: 2px;">remove</div>
4			<div style="border: 1px solid #ccc; padding: 2px;">remove</div>
5			<div style="border: 1px solid #ccc; padding: 2px;">remove</div>
6			<div style="border: 1px solid #ccc; padding: 2px;">remove</div>
7			<div style="border: 1px solid #ccc; padding: 2px;">remove</div>
8			<div style="border: 1px solid #ccc; padding: 2px;">remove</div>
9			<div style="border: 1px solid #ccc; padding: 2px;">remove</div>
10			<div style="border: 1px solid #ccc; padding: 2px;">remove</div>

☐ Allow admin ip address always access this device

Admin ip address:

apply

- d. QoS/DSCP(Quality of Server/Differentiated Services Code-point) :
DSCP specifies a simple mechanism for classifying and managing network traffic and provide QoS on IP networks. DSCP is a 6-bit in the IP header for packet classification purpose. Please define the reserve for Live Stream, Event / Alarm and Management.

QoS/DSCP

QoS/DSCP Setting

☒ Enable QoS/DSCP

Live Stream:

(0~63)

Event / Alarm:

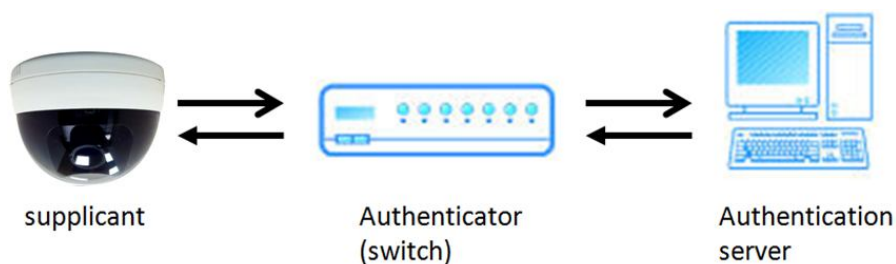
(0~63)

Management:

(0~63)

Apply

- e. IEEE 802.1x :
IEEE 802.1x is an IEEE standard for port-based Network Access Control. It provides an authentication mechanism to device wishing to attach to a LAN or WLAN.
The EAPOL protocol support service identification and optional point to point encryption over the local LAN segment.



Please check what version of the authenticator and authentication server support. This camera supports EAP-TLS method. Please enter ID, password issued by the CA, then upload related certificates.

IEEE 802.1x/EAP-TLS	
IEEE 802.1x Setting	
<input type="checkbox"/> Enable IEEE 802.1x	
Eapol version:	<input checked="" type="radio"/> v1 <input type="radio"/> v2
Identity:	<input type="text"/>
Private key password:	<input type="password"/>
	<input type="button" value="Apply"/>
CA certificate:	<input type="text"/> <input type="button" value="Upload"/> <input type="button" value="瀏覽..."/>
Status:	<input type="text"/> <input type="button" value="Remove"/>
Client certificate:	<input type="text"/> <input type="button" value="Upload"/> <input type="button" value="瀏覽..."/>
Status:	<input type="text"/> <input type="button" value="Remove"/>
Client private key:	<input type="text"/> <input type="button" value="Upload"/> <input type="button" value="瀏覽..."/>
Status:	<input type="text"/> <input type="button" value="Remove"/>

iii 、 PPPoE & DDNS :

PPPoE	
PPPoE Setting	
<input type="radio"/> Enabled	<input checked="" type="radio"/> Disabled
Username:	<input type="text"/>
Password:	<input type="password"/>
Send mail after dialed	
<input type="checkbox"/> Enabled	
Subject:	<input type="text" value="PPPoE From IPcam"/> <input type="button" value="Apply"/>

- a. PPPoE : Select “Enabled” to use PPPoE. Key-in Username and

password for the ADSL connection. Send mail after dialed : When connect to the internet, it will send a mail to a specific mail account. For the mail setting, please refer to “Mail and FTP” settings.

b. DDNS :

It supports DDNS (Dynamic DNS) service.

1. DynDNS :

DDNS

DDNS Setting

☐ Enabled ☒ Disabled

Provider: dyndns.org

Hostname:

Username:

Password:

Schedule Update: 1440 Minutes

State

Idle

Apply

Note:

1. Schedule Update: Feature of DDNS schedule update is designed for IP products which installed behind the ICS or NAT devices. Update range from every 5 (minutes) to 5000 (minutes) and 0 remain to off.

2. Please note that the hostname will be blocked by DynDNS.org if schedule update is more than once every 5 minutes to 60 minutes. In general, schedule update in every 1440 minutes is recommended.

- (1) Enable this service
 - (2) Key-in the DynDNS server name, user name, and password.
 - (3) Set up the IP Schedule update refreshing rate.
 - (4) Click “Apply”
 - (5) If setting up IP schedule update too frequently, the IP may be blocked. In general, schedule update every day (1440 minutes) is recommended
2. Camddns service :

DDNS

DDNS Setting

☐ Enabled ☒ Disabled

Provider: ddns.camddns.com

Username:

Schedule Update: 1440 **Minutes**

State

Idle

Note:
 1. **Schedule Update:** Feature of DDNS schedule update is designed for IP products which installed behind the ICS or NAT devices. Update range from every 5 (minutes) to 5000 (minutes) and 0 remain to off.
 2. Please note that the hostname will be blocked by DynDNS.org if schedule update is more than once every 5 minutes to 60 minutes. In general, schedule update in every 1440 minutes is recommended.

- (1) Please enable this service
- (2) Key-in user name.
- (3) IP Schedule update is default at 5 minutes
- (4) Click "Apply".
3. DDNS Status
 - (1) Updating : Information update
 - (2) Idle : Stop service
 - (3) DDNS registration successful, can now log by
http://<username>.ddns.camddns.com : Register successfully.
 - (4) Update Failed, the name is already registered : The user name has already been used. Please change it.
 - (5) Update Failed, please check your internet connection :
Network connection failed.
 - (6) Update Failed, please check the account information you provide : The server, user name, and password may be wrong.

iv 、 Server setting

There are three choices of server types available: Email, FTP and SAMBA. Select the item to display the detailed configuration options. You can configure either one or all of them.

To send out the video via mail of ftp, please set up the configuration first.

Server Settings	
Mail Setting	
Login Method:	Account ▼
Mail Server:	<input type="text"/>
Username:	<input type="text"/>
Password:	<input type="password"/>
Sender's Mail:	<input type="text"/>
Receiver's Mail:	<input type="text"/>
Bcc Mail:	<input type="text"/>
Mail Port:	25 (Default 25)
<input type="checkbox"/> Secure Connect:	<input checked="" type="radio"/> TLS <input type="radio"/> SSL
<input type="button" value="Test"/>	
FTP Setting	
Samba (Network storage)	
<input type="button" value="Apply"/>	

C.A/V Setting

i、Image Setting

Camera

Privacy Mask

Area 1 Area 2 Area 3 Save

Image Setting

Brightness: 0

Contrast: 0

Hue: 0

Saturation: 0

Sharpness: 0

AGC: 8x

Shutter Time: Outdoor

Sense-Up: 1/15

D-WDR: Off

Gamma: ☒ Outdoor ☐ Indoor

Exposure: 0

Video Orientation: ☐ Flip ☐ Mirror

Day & Night: Light Sensor Mode

Day Lux: 7 lux (about) Night Lux: 3 lux (about)

Current Lux: over 55 lux (about)

DNR: 1 (low)

Default

For the security purpose, there are three areas can be setup for privacy mask. Click Area button first and pull a area on the above image. Finally, click **Save** button to reserve the setting.

Adjust “Brightness”, “Contrast”, “Hue”, “Saturation, Sharpness, AGC,” to get clear video.

Moreover, IP CAMERA supports “Back Light Compensation”, “Night Mode”, “D-WDR”, “Video Orientation” and “Denoise.”

ii、Video Setting

User may select 2 streaming output simultaneously:

Streaming 1 Setting: Basic mode and Advanced mode

Streaming 2 Setting: Basic mode, Advanced mode, and 3GPP mode

(Max Video Frame Rate for both streaming combined is 30 FPS)

- a. Video System: click the drop down list to select the system type

Video Setting	
Video System:	NTSC ▼

- b. Streaming 1 Basic Mode :

Streaming 1 Setting	
<input checked="" type="radio"/> Basic Mode <input type="radio"/> Advanced Mode	
Resolution:	1280x800 ▼
Quality:	Standard ▼
Video Frame Rate:	30 FPS ▼
Video Format:	H.264 ▼
RTSP Path:	<input type="text"/> ex:rtsp://IP/ Audio:G.711

1. Resolution :

There are 5 resolutions can be chosen.

1280x 800, 1280x720, 640x480, 320x240, 176x144

2. Quality :

There are 5 levels to adjust:

Best/ High/ Standard/ Medium/ Low

The higher the quality is, the bigger the file size is. Also not good for internet transmitting

3. Video Frame Rate : The video refreshing rate per second.

4. Video Format : H.264 or JPEG or MPEG4

5. RTSP Path: RTSP output name

- c. Streaming 1 Advanced Mode :

Streaming 1 Setting	
<input type="radio"/> Basic Mode <input checked="" type="radio"/> Advanced Mode	
Resolution:	1280x800 ▼
Bitrate Control Mode:	<input checked="" type="radio"/> CBR <input type="radio"/> VBR
Video Quantitative:	7 ▼
Video Bitrate:	4Mbps ▼
Video Frame Rate:	30 FPS ▼
GOP Size:	1 X FPS ▼ GOP = 30
Video Format:	H.264 ▼
RTSP Path:	<input type="text"/> ex:rtsp://IP_Adress/ Audio:G.711

1. Resolution :

There are 5 resolutions can be chosen.

1280x800, 1280x720, 640x480, 320x240, 176x144

2. Bitrate Control Mode

There are CBR [Constant Bit Rate] and VBR [Variable Bit Rate] to use.

CBR : 32Kbps~8Mbps (the higher the CBR is, the better the video quality is)

VBR : 1(Low)~10(High) – Compression rate, the higher the compression rate, the lower the picture quality is; vise versa. The balance between VBR and network bandwidth will affect picture quality. Please carefully select the VBR rate to avoid picture breaking up or lagging.

3. Video Frame Rate

The video refreshing rate per second.

NTSC: Max 30 frames/second PAL: Max 25 frames/second

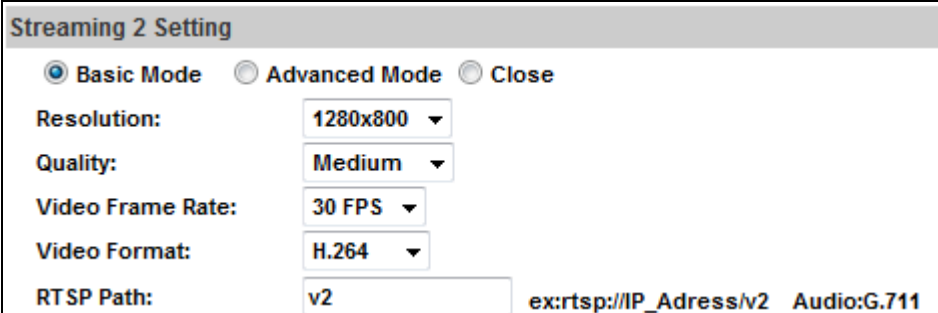
4. GOP Size

It means "Group of Pictures". The higher the GOP is, the better the quality is.

5. Video Format : H.264 or JPEG or MPEG4

6. RTSP Path: RTSP output connecting route

d. Streaming 2 Basic Mode :



Streaming 2 Setting

☒ Basic Mode ☐ Advanced Mode ☐ Close

Resolution: 1280x800

Quality: Medium

Video Frame Rate: 30 FPS

Video Format: H.264

RTSP Path: v2 ex:rtsp://IP_Address/v2 Audio:G.711

1. Resolution :

There are 5 resolutions can be chosen.

1280x800, 1280x720, 640x480, 320x240, 176x144

2. Quality :

There are 5 levels to adjust:

Best/ High/ Standard/ Medium/ Low

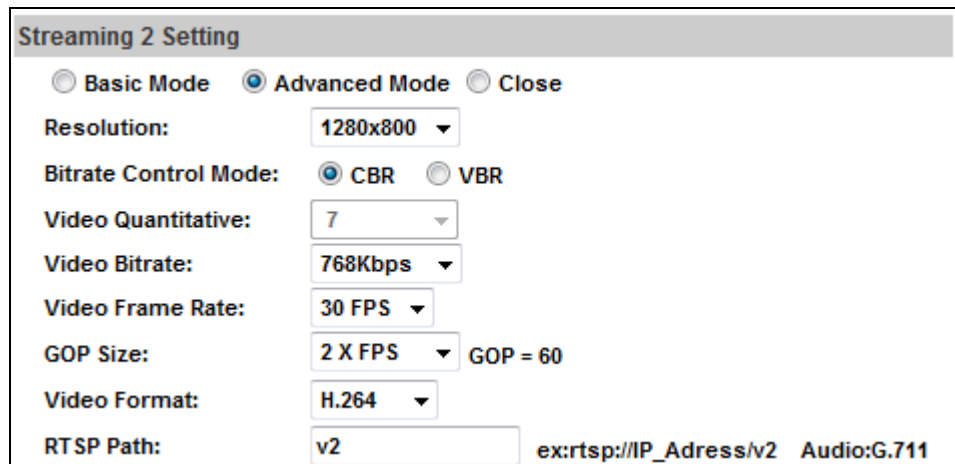
The higher the quality is, the bigger the file size is. Also not good for internet transmitting

3. Video Frame Rate : The video refreshing rate per second.

4. Video Format : H.264 or JPEG or MPEG4

5. RTSP Path: RTSP output connecting route

e. Streaming 2 Advanced Mode :



Streaming 2 Setting

☐ Basic Mode
 ☒ Advanced Mode
 ☐ Close

Resolution: 1280x800

Bitrate Control Mode: ☒ CBR ☐ VBR

Video Quantitative: 7

Video Bitrate: 768Kbps

Video Frame Rate: 30 FPS

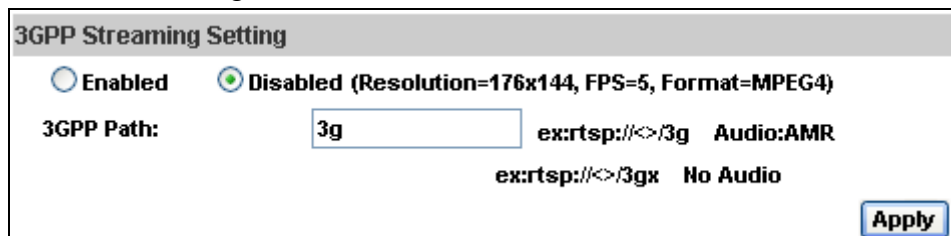
GOP Size: 2 X FPS GOP = 60

Video Format: H.264

RTSP Path: v2 ex:rtsp://IP_Address/v2 Audio:G.711

1. Resolution :
There are 5 resolutions can be chosen.
1280x800, 1280x720, 640x480, 320x240, 176x144
2. Bitrate Control Mode
There are CBR (Constant Bit Rate) and VBR (Variable Bit Rate) to use.
CBR : 32Kbps~8Mbps (the higher the CBR is, the better the video quality is)
VBR : 1~10 (Compression Rate)
3. Video Frame Rate
The video refreshing rate per second.
4. GOP Size
It means "Group of Pictures". The higher the GOP is, the better the quality is.
5. Video Format : H.264 or JPEG or MPEG4
6. RTSP Path: RTSP output name

f. 3GPP Streaming mode:



3GPP Streaming Setting

☐ Enabled
 ☒ Disabled (Resolution=176x144, FPS=5, Format=MPEG4)

3GPP Path: 3g ex:rtsp://</>/3g Audio:AMR

ex:rtsp://</>/3gx No Audio

Apply

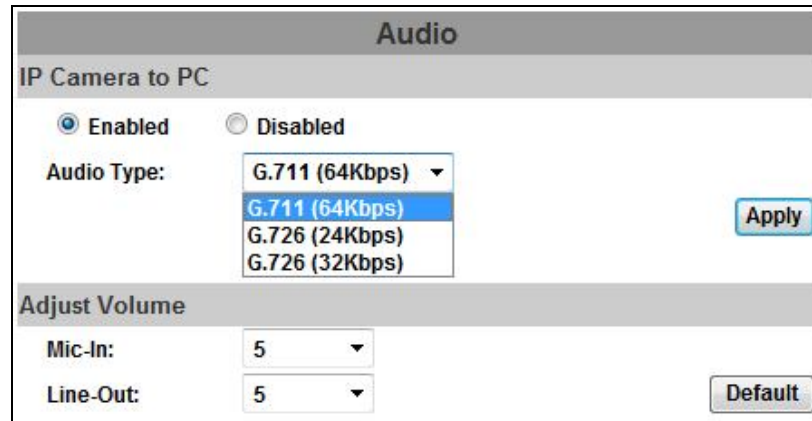
3GPP mode suggested setting: 176x144 resolution, 5FPS, MPEG4 format

1. Enable or Disable 3GPP Streaming
2. 3GPP: 3GPP output name

iii 、 Audio :

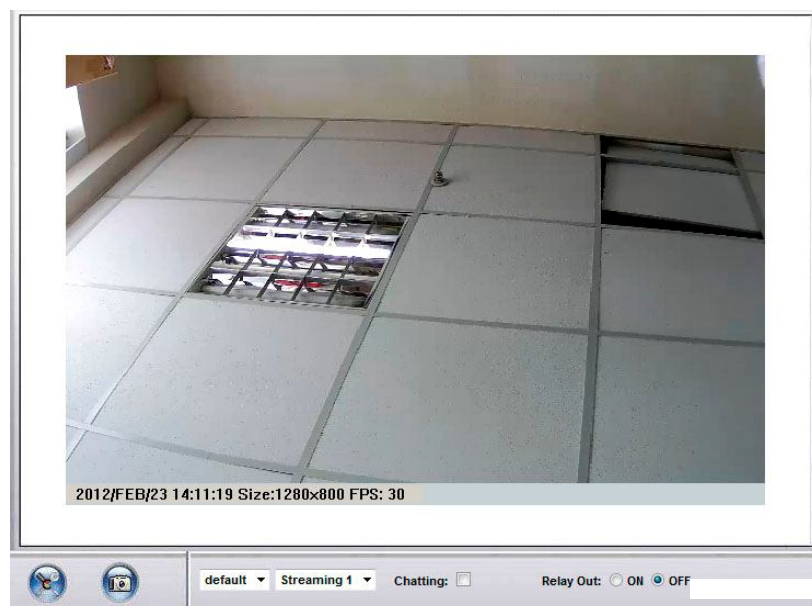
IP CAMERA supports 2-way audio. User can send audio from IP Camera mic input to remote PC; User can also send audio from remote PC to IP Camera's external speaker.

- a. Audio from IP camera built-in mic to local PC: select "Enable" to start this function. There are three audio type you can choose. Mic-in and Line-Out items can adjust the volume.



The screenshot shows the 'Audio' configuration window. Under the 'IP Camera to PC' section, the 'Enabled' radio button is selected. The 'Audio Type' dropdown menu is open, showing three options: 'G.711 (64Kbps)', 'G.726 (24Kbps)', and 'G.726 (32Kbps)'. The 'G.711 (64Kbps)' option is currently selected. There is an 'Apply' button to the right of the dropdown. Below this, the 'Adjust Volume' section has two dropdown menus: 'Mic-In' and 'Line-Out', both set to '5'. A 'Default' button is located to the right of these volume controls.

- b. Audio from local PC to IP Camera: Check "chatting" in the browsing page.

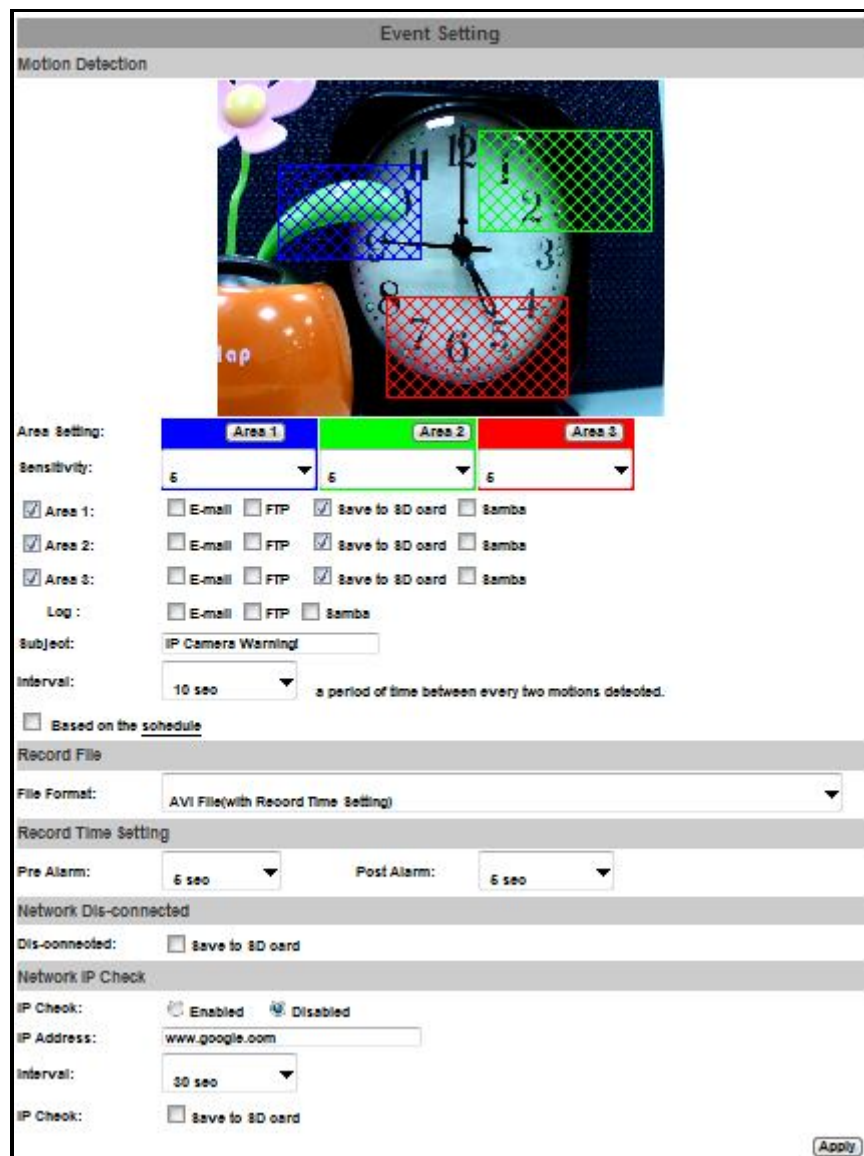


The Audio will not be smooth when enable SD card recording function simultaneously.

D.Event

IP CAMERA provides multiple event settings.

i、Event Setting



- a. Motion Detection :
IP CAMERA allows 3 areas motion detection. When motion is triggered, it can send the video to some specific mail addresses, transmit the video to remote ftp server, trigger the relay, and save video to local SD card and SAMBA. To set up the motion area, click “Area Setting”. Using mouse to drag and draw the area. The same operation for area 2 and 3.
- b. Record File Setting: IP CAMERA allows 3 different types of recording file to change its record size.
When motion/alarm is triggered, there are 3 different types of record mode.
 1. AVI File (With Record File Setting)
 2. Multi-JPEG (With Record File Setting), only with JPEG

compression format.

3. Single JPEG (Single File with Interval Setting)

c. Record Time Setting :

Pre Alarm and Post Alarm setups for video start and end time when motion detected or other devices got triggered.

Note: Pre/Post Alarm record time is base on record time setting and IP Cam built-in Ram memory. Limited by IP Cam built-in Ram Memory, When information is too much or video quality set too high, it will cause recording frame drop or decrease on post alarm recording time.

d. Network Dis-connected :

When the network is down, it will save the video to local Micro SD card.

This function is only enabled in wire connection.

e. Network IP check


When the connection is down, it records the video to Micro SD card. Make sure the video recording is continuous. To use this function, key in the IP address of the PC which has recording software installed. Enable the function of "Save to SD card", then click "Apply".

The interval of two video files on SD card is with 30 - 60 seconds.

ii 、 Schedule

- a. Schedule: After complete the schedule setup, the camera data will be recorded according to the schedule setup.
- b. Snapshot: After enable the snapshot function, user can select the storage position of snapshot file, the interval time of snapshot and the reserved file name of snapshot.

Schedule																								
All	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Mon.																								
Tue.																								
Wed.																								
Thu.																								
Fri.																								
Sat.																								
Sun.																								

 With schedule setup.

Snapshot	
<input type="radio"/> Enabled	<input checked="" type="radio"/> Disabled
Snapshot:	<input type="checkbox"/> E-mail <input type="checkbox"/> FTP <input type="checkbox"/> Save to SD card <input type="checkbox"/> Samba
Interval:	10 Second(s) [1..50000]
File Name:	Snapshot

iii 、 I/O Setting

IP CAMERA supports 1 input/ 1 output. When input is triggered, it can send the video to some specific mail addresses, transmit the video to remote ftp server, trigger the relay, and save video to local SD card and Samba.

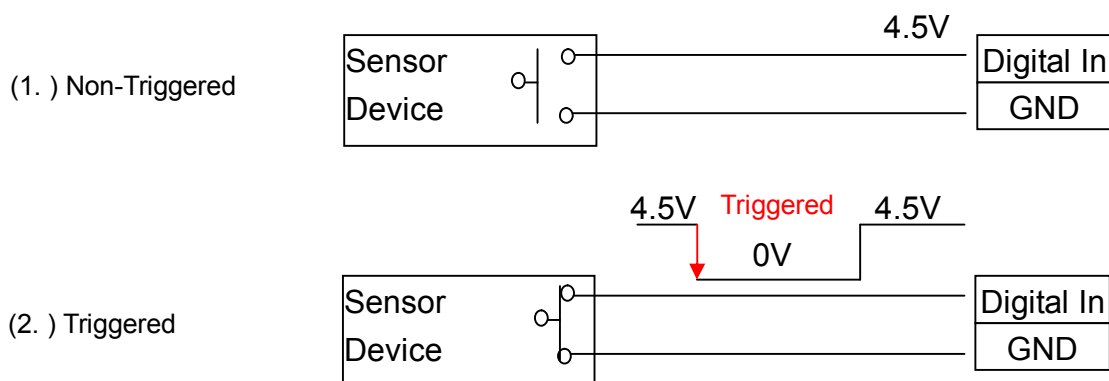
I/O Setting	
Input Setting	
Input 1 Sensor:	N.O
Input 1 Action:	<input type="checkbox"/> E-mail <input type="checkbox"/> FTP <input type="checkbox"/> Out1 <input type="checkbox"/> Save to SD card <input type="checkbox"/> Samba
Subject:	GPIO In Detected!
Interval:	10 sec
<input type="checkbox"/> Based on the <u>schedule</u>	
Output Setting	
Mode Setting:	<input checked="" type="radio"/> OnOff Switch <input type="radio"/> Time Switch
Interval:	10 sec

CATUTION!!

Please connect to propriety relay box to reduce the risk of electric shock & damaged.

Alarm Input Setting

By GPIO I/O port input that provide related action while I/O input triggered.



Digital Output Setting

In Digital output setting, the user can setup the output device to perform the related output action.

I/O PIN definition, please refer to the following statement

D.O	Digital Input:
GND	Standard Voltage: 5V (internal Voltage)
D.I	Digital Output:
GND	Depends on the devices, the user should connect Relay device first.

iv 、 Log List

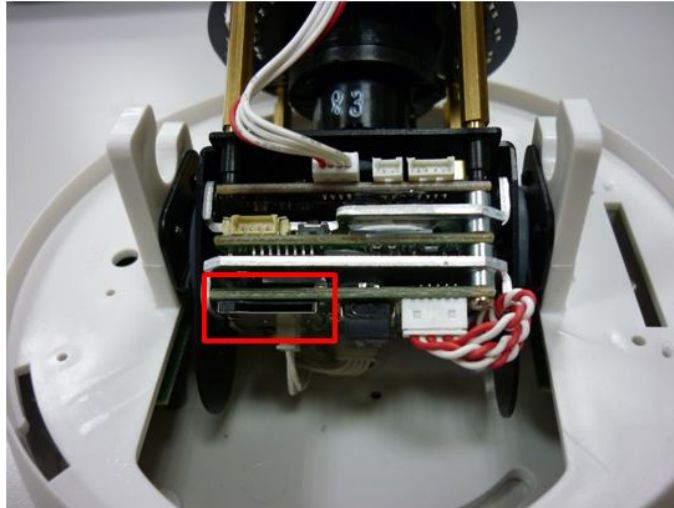
Log List	
System Logs	Logs
Motion Detection Logs	Logs
All Logs	Logs

Sort by System Logs, Motion Detection Logs. In addition, System Logs won't lose data due to power failure.

v 、 Micro SD card

Please Insert Micro SD card before use it. Make sure pushing Micro SD card into the slot completely.

Note : The use of the Micro SD card will affect the operation of the IP CAMERA slightly, such as affecting the frame rate of the video.



a. Playback :



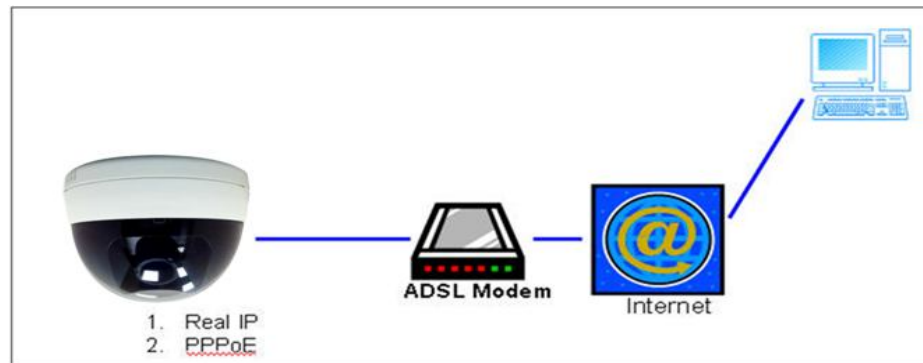
1. It will show the capacity of the SD card. Click the date listed on this page. It will show the list of the video.

2006/04/17			Del
Time	Video	Event Type	<input type="checkbox"/>
09:05:22	090522f.avi	Network Dis-connected	<input type="checkbox"/>
09:05:52	090552f.avi	Network Dis-connected	<input type="checkbox"/>
09:06:22	090622f.avi	Network Dis-connected	<input type="checkbox"/>
09:06:52	090652f.avi	Network Dis-connected	<input type="checkbox"/>
09:07:22	090722f.avi	Network Dis-connected	<input type="checkbox"/>
09:07:52	090752f.avi	Network Dis-connected	<input type="checkbox"/>
09:08:22	090822f.avi	Network Dis-connected	<input type="checkbox"/>
09:08:51	090851f.avi	Network Dis-connected	<input type="checkbox"/>
09:09:21	090921f.avi	Network Dis-connected	<input type="checkbox"/>
09:09:51	090951f.avi	Network Dis-connected	<input type="checkbox"/>

2. The video format is AVI. Click the video to start Microsoft Media Player to play it.
3. To delete the video, check it, then click **Del**. When the SD card is full, it will remove the oldest video automatically.

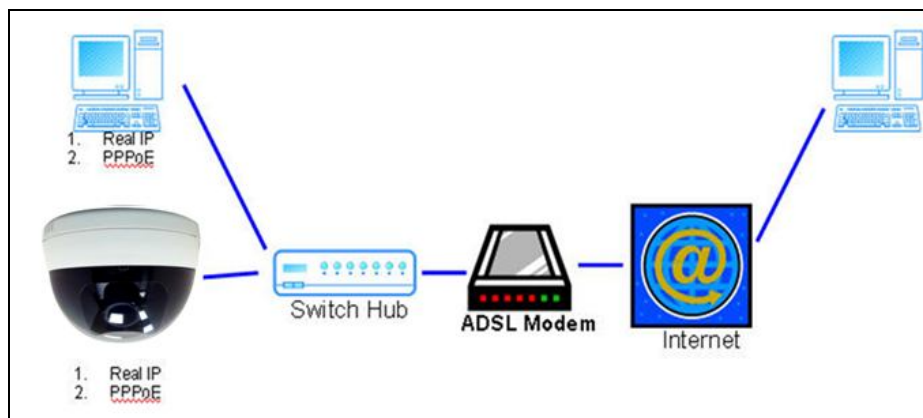
Network Configuration

i 、 Configuration 1 :



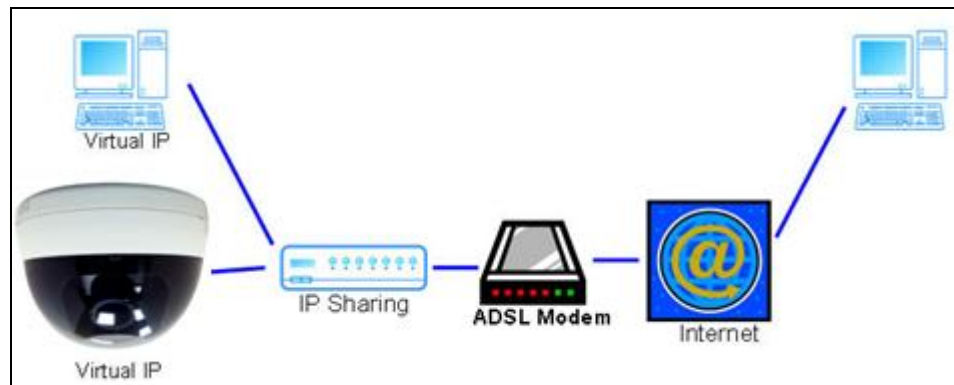
- a. Internet Access : ADSL or Cable Modem
- b. IP address : One real IP or one dynamic IP
- c. Only IP CAMERA connects to the internet
- d. For fixed real IP, set up the IP into IP CAMERA. For dynamic IP, start PPPoE.

ii 、 Configuration 2 :



- a. Internet Access : ADSL or Cable Modem
- b. IP address : More than one real IP or one dynamic IP
- c. IP CAMERA and PC connect to the internet
- d. Device needed : Switch Hub
- e. For fixed real IP, set up the IP into IP CAMERA and PC. For dynamic IP, start PPPoE.

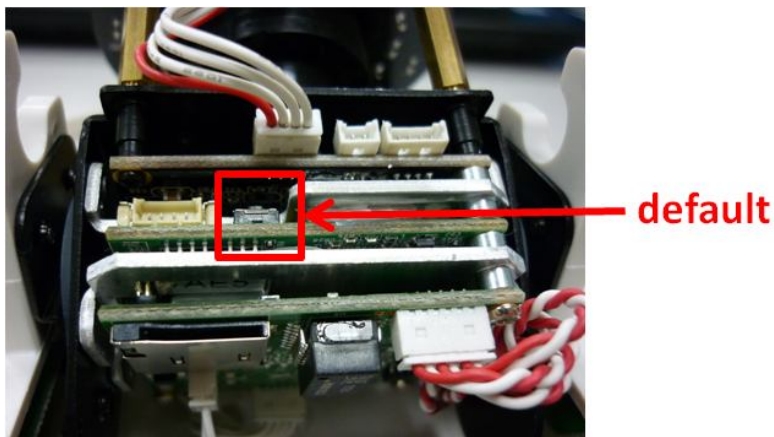
iii 、 Configuration 3 :



- a. Internet Access : ADSL or Cable Modem
- b. IP address : one real IP or one dynamic IP
- c. IP CAMERA and PC connect to the internet
- d. Device needed : IP sharing
- e. Use virtual IP, set up port forwarding in IP sharing.

VI. Factory Default

- If the user name, password, and IP address are lost, please follow the following instructions.
- Press and hold the following button in the back of IP Camera first and unplug the power adapter at the same.



- Plug in the power adapter and do not release the button during the IP Camera booting.
- It will take around 20 seconds to boot the IP Camera.
- Release the button after the IP Camera finishes booting.
- Reconnect the IP Camera with the default IP address (<http://192.168.1.200>), user name is **admin**, and password is **admin**.

VII. Package contents

- IP CAMERA Network Camera
- Adaptor
- Quick installation guide
- CD title (User manual, IP installation Utility)

Micro SD Card Compatibility

The following is the Micro SD Card recommended:

Transcend	SDHC	class4	16GB
	SDHC	class4	32GB
	SD	class4	16GB
	SD	class4	32GB
	SDHC	class6	4GB
	SDHC	class6	8GB
	SDHC	class6	16GB
	SD	class6	4GB
	SD	class6	8GB
	SD	class6	16GB
SanDisk	SDHC	class4	4GB
	SDHC	class4	8GB
	SDHC	class4	16GB